Supplementary Material

Figure S1. RT-PCR analysis of *PAF1* in *ars5-1*. RT-PCR products of *PAF1* are present in WT and *paf2* mutant but absent in the *ars5-1* mutant. *ACT7* was used as loading control.

Figure S2. Expression of either genomic or cDNA *PAF1* in *ars5-1*. Expression of *PAF1* in *ars5-1* complemented with three different constructs was confirmed by RT-PCR. A1-A21: *ars5-1* transformed with 35S-*PAF1* cDNA; B1-B2: *ars5-1* transformed with 35S-*PAF2*; C1-C13: *ars5-1* transformed with 7kb *PAF1* genomic segment containing the promoter and the coding region of *PAF1*. ACT7 was used as a loading control.

Figure S3. Accumulation of ubiquitinylated proteins in *ars5-1* and WT. One week-old *ars5* and wild type Arabidopsis plants were treated with 100, 500, 1000, 1500 μM arsenate for 96 hours, then total proteins were extracted and separated in 10% SDS-PAGE. Proteins were transferred to a PVDF membrane and ubiquitinylated proteins were detected with an anti-ubiquitin antibody (1:10,000 dilution) for one hour at room temperature. Chemiluminescence signal, after incubation with the secondary anti-rabbit antibody (1:10,000 dilution), was visualized using X-ray film.

Supplementary File 1. Microarray data from WT and *ars4ars5* plants exposed to arsenate. Total RNA from 10 day-old seedlings (Col-0 WT and *ars4ars5*), grown in minimal media containing 200 μM arsenate, was hybridized using Affymetrix ATH1 chip arrays. Probe ID is shown in Column A, signal intensities are shown in Column B (WT Col + As) and Column C (*ars4ars5* + As). Fold-change between WT Col vs *ars4ars5* is shown in Column D (log2) and Column E (fc).